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Metal-Insulator Transition in thin Gadolinium Films[1] RAJ V.A. SRIVASTAVA, AARON COLLIER, D.G. NAUGLE, WINFRIED TEIZER, Department of Physics, Texas A&M University, College Station, Texas, 77843-4242. — Two dimensional thin films of gadolinium were prepared in an ultra high vacuum chamber using electron-beam evaporation onto a cold substrate. The percolation limit was reached with the thinnest films, while thicker films show metallic behavior. Electronic measurements were conducted in-situ at low temperatures and nonlinear I-V curves were observed for the thinnest films. Progress in this ongoing study will be presented and applied to a better understanding of metal- insulator transitions in two dimensional disordered systems.

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